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ABSTRACT

Most word learning studies conducted over the past decade have shown that methods of word instruction that emphasize the graphic or phonic features of words presented alone (word alone method) affect learning rate more positively than do methods that emphasize meaning through oral, written, and pictorial cues (context methods). To compare the efficiency of the two methods of word instruction, a 1981 study examined the performance of 158 kindergarten children on two separate modes of assessment--a sentence mode test (paralleling aspects of the context treatment) and an isolation mode test (paralleling aspects of the word alone treatment). The findings of that study suggested that isolation mode tests yielded performance scores biased in favor of children taught by word alone methods. To extend the findings, a second study selected the number of words recognized on the sentence mode test protocols of 11 children from the context method group and matched them with those of 11 children from the word alone group. The oral reading errors made by children on the sentence mode test were analyzed to determine the differential influence of the two methods on their use of graphophonic, syntactic, and semantic constraints. The results showed no significant differences between groups in their use of graphophonic cues. However, context method children used syntactic and semantic constraints more effectively than did word alone children. (FL)

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The Influence of Two Methods of Teaching Reading on Beginners' Perceptions of the Reading Process

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Abstract

In a previous study (Ceprano, 1981) 158 beginning readers were taught five words per day over an eight day period by a method emphasizing context cues (C) or a method emphasizing the graphophonic features of the words presented alone (WA). For this study, the number of words recognized on the sentence mode test protocals of eleven subjects from the Context method group were selected and matched with those of eleven subjects from the Word Alone method group. The oral reading errors made by the subjects on the sentence mode test were analyzed to determine the differential influence of the two methods on children's use of graphophonic, syntactic and semantic constraints. Findings showed no significant difference between groups in their use of graphophonic cues. However, the Context method group used syntactic and semantic constraints more effectively than the Word Alone method group.

Although some evidence has been introduced to the contrary (Arlin, Scott and Webster, 1978-1979; Hartley, 1970), the preponderance of word learning studies conducted over the past decade has shown that methods of word instruction which emphasize the graphic and/or phonic features of words presented alone (Word Alone methods) affect learning rate more positively than do methods which emphasize meaning via oral, written and pictorial cues (Context methods) (Braun, 1969; Samuels, 1967; Samuels, Singer and Spiroff, 1973-1974 and others). Yet research addressing the qualitative effects of such instructional methods on children's developing reading strategies is still at the exploratory state (Barr, 1972; Ehri and Roberts 1979; Ehri and Wilce, 1979-1980). In a previous paper, Ceprano (1981) described a naturalistic study conducted with beginning readers in which the efficiency of a Context method and a Word Alone method of word instruction were compared on two separate modes of assessment; a sentence mode test (paralleling aspects of the context treatment) and an isolation mode test (paralleling aspects of the word alone treatment). The findings of the study showed a significant interaction of method of instruction and mode of assessment (see Figure 1).

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Insert Figure 1 about here.
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While the Word Alone method group recognized more words on both tests, differences in performance sources between groups were significant only on the isolation test. The results of the study suggested that isolation mode tests yield performance scores biased in favor of children taught by word alone methods. Consequently, the results of previous word learning studies alleging the superiority of Word Alone methods via isolation

assessment modes exclusively were called into question. The suggestion was made that since effective reading of textual material is the end of reading instruction, regardless of method, that a more appropriate mode of evaluation in word learning studies might well be sentence mode tests. Questions pertaining to the differential influence of the two methods (Context and Word Alone) on children's developing reading strategies stemmed from the observation that the Context method group had recognized essentially the same number words in sentences that they had in isolation (98.2%) while the Word Alone group had recognized significantly fewer on the former than on the latter (76%). These questions were specifically (a) Did the Word Alone method find surrounding context distracting rather than inhibiting to the process of recognizing words? and (b) Did the Word Alone group react to words in sentences on a word by word basis neglecting the cue value of syntax and meaning?

In the present study, answers to these questions were sought through an extended analysis of the sentence data acquired for the original study. This was done by comparing the extent to which children in each treatment needed aid and committed substitution errors; the nature of substitutions; and the extent to which children in each group corrected their own errors as they read the words in sentences. The psycholinguistic theory upon which such an analysis is predicated has been fully described by Goodman (1968) and Goodman and Goodman (1978). In essence the theory contends that as readers interact with text they simultaneously process grapho-phonic, syntactic and semantic cues all the while using sampling, predicting, confirming and correcting strategies to construct meaning.

Methodology

Subjects

Subjects for this study were selected from 158 prereading kindergarteners who participated in the original study. Since subjects were desired who had learned enough sight words so that they had been able to read the sentences, with minimal frustration, eleven subjects from the Context method group who had recognized twenty or more words on the sentence mode test were matched for similar performance by eleven subjects from the Word Alone method group. The scores received by the closely matched pairs (based on a tally of the first occurrence of the word on the sentence mode test) are shown in Table 1.

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Insert Table 1 about here
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Scores of subjects in this subsample were among the highest obtained by any subjects in the original sample although children with perfect scores were not used since the analysis of miscues was of interest.

Procedure

A detailed overview of the Context and Word Alone procedures used for eight instructional sessions as well as an extensive description of the word list, instructional materials and test materials has been elsewhere described by Ceprano (1980, 1982). Essentially, subjects were taught five words per day for eight days by a Context method or by a Word Alone method. Word learning efficiency was assessed following the last instructional session (Delayed Retention) and again two weeks after instruction had been terminated. Each time assessment was accomplished on an isolation mode test and a sentence mode test. The sentence test providing the data base for the questions to which this study was directed was the one administered upon completion of the eight instructional sessions in the first study. It consisted of 18

sentences three to six words in length formed exclusively of words that had been taught. The sentences were presented individually on 2 X 8 cards and the Gray marking system (1960) was used to note errors as well as the self corrections made by the children as each sentence was read aloud. (See Appendix.)

In the first study, a tally of the first occurence of the word in a sentence was used to determine each group's efficiency score in sentences but in this study each sentence was examined to determine the extent to which children in each treatment group displayed the need for aid, substitution behavior or self correction. Each substitution was further examined to see if it was constrained graphophonetically, syntactically. A definition of each category established for the error analysis is provided here:

I. Aids

The child made no attempt to identify the word. After about six seconds, the examiner pronounced the word for the child.

II. Substitutions (Subs)

The child substituted a word or a syllable for the actual word in the sentence. Substitutions were further examined to see if they were:

a. Constrained graphically and/or phonetically (GP)

In this case the initial letter or sound of the substituted word was the same as that of the actual word.

i.e. It is a ~~cookbook~~ cookie.

I play a ~~trick~~ train.

Since prereader tendency to reverse and/or transpose has been documented (Barr, 1975) errors whose first letters were transpositions of the first letter in

the actual word were also tabulated.

i.e. Mother said ~~good-bye~~ bye-bye.

Also considered were certain word errors believed to graphically approximate the actual word in the sentence if it were reversed or transposed.

i.e. I ~~read~~ bear a book.

b. Constrained by syntax before as well as following the error (SBF)

i.e. Ben ~~said~~ will, come here.

c. Constrained by syntax before the error (SB)

i.e. The bear is ~~big~~ going.

d. Constrained by syntax following the error (SF)

i.e. The ~~dog~~ pig is little.

e. Constrained by Meaning (Mean); that is, the error produced a sensible sentence.

i.e. We ~~see~~ ate a pig.

f. Corrected by the reader (COR)

i.e. Come here and play. ~~people~~

Each error was examined for possible classification within each category. In coding, a score of 1, denoting yes signified the error met the defined specifications for the particular category; a score of 0, denoting no signified the error did not. A blank (_) denoted that an error could not be feasibly analyzed according to the defined specifications for a particular category. For example, in the sentence, "~~The~~ That bear is brown," a blank was registered for category IIb and IId. However a score of 1 was given for category II, IIa, IId and IIe and a score of 0 was given for all other categories.

A fellow professor of reading assisted as independent rater of errors produced by five subjects chosen at random and achieved 95.6% agreement with

the investigator. Because raw scores computed for each category were not comparable among subjects they were converted to proportions.

Table 2 shows the mean proportion of aids and substitutions made by each treatment group. It also shows the mean proportion of substitutions meeting each of the specified category definitions. The significance level of differences between groups in each category was computed using a 1 (category) X 2 (treatment) univariate analysis of variance. It can be seen that while the Context group tended to need more aid (I) than the Word Alone group and was less inclined to make substitutions (II) the differences between the two groups on these general categories was non-significant.

When the specific nature of substitutions made by the two groups was compared, the Context group's errors were found to be constrained by Context (IIb) to a significantly higher degree than did the errors of the word slone group F (1, 20) 16.14 = p. .001. And while the errors of both groups were more apt to be constrained by syntax before the error than following the error, the Context group used both constraints to a significantly higher degree: syntax before, F (1, 20) 6.7985 = p.< .01; and syntax following, F (1,0) 9,8315 = p.< .01. Substitutions of the Context method group were also found to be meaningful (IIe) significantly more often than those of the Word Alone group F (1, 20) 17.95 = p.< .001. Interestingly, both groups used graphophonic constraints (IIa) quite heavily and to essentially the same degree.

Conversely, both groups self corrected a very small portion of their errors, and though no significant difference was computed for category IIf, the Context group showed more a tendency than the Word Alone group to realize an error had been made and to make an attempt to correct it.

An observation made while coding the data but not subjected to formal

analysis was the inclination on the part of all subjects to substitute words in the sentences with other words from the target list. In this study, almost every substitution examined was a word from the target list. Barr (1972) noted a similar observation in her examination of beginner's reading strategies and concluded that this behavior typified an unsophisticated guess strategy common to children at the initial stages of reading development. For the present study such an observation suggests that the proportional use of all linguistic cues formally scrutinized (graphophonic, sytactic and semantic) was governed by the inclination to substitute previously taught words. In spite of this same inclination on the part of both groups the Context method group more often attempted to integrate the syntactic and the semantic cues with the graphophonic cues of the words within them.

Conclusions

Within the limitations of this small select sample the findings suggest that the Word Alone and the Context method approaches to sight word instruction, even in the limited time that it takes to teach an initial sight vocabulary, affect reading strategies differentially. In spite of a tendency to learn words more slowly, a contextual approach imparts other skills besides graphonic awareness. . .skills which facilitate the child utilization of syntactic and semantic cues in text and which are required for a meaningful interaction with text.

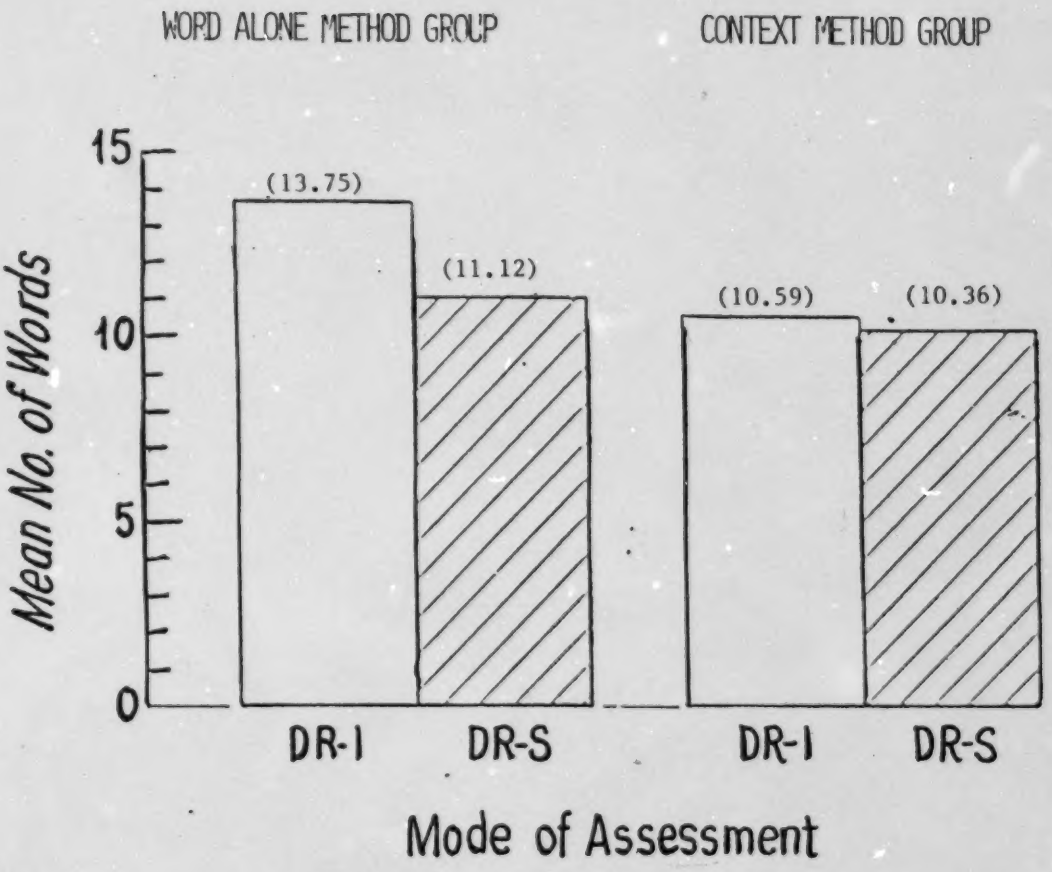

FIGURE 1. MEAN NUMBER OF WORDS RECOGNIZED ON THE DELAYED RETENTION ISOLATION MEASURE (DR-I) AND THE DELAYED RETENTION SENTENCE MEASURE (DR-S) BY CHILDREN IN EACH TREATMENT GROUP.

Figure 1. is taken from Ceprano, 1981.

Table 1

Word Recognition Scores Received

Context and Word Alone Subjects on the

Sentence Mode Test

	Subject											
Treatment	1	2	3	4	5	6	7	8	9	10	11	X
Word Alone	37	33	30	30	30	29	27	26	26	24	23	28.6
Context	33	32	30	32	28	27	26	27	27	25	23	28.2

Table 2

Mean Proportion of Aids, Substitutions, Nature of Substitution And Corrections Made by Context and Word Alone Groups

N = 22

Percentages of	Treatment: Word Alone	Treatment: Context
General Error Types		
Category		
I. Aids	.40	.46
II. Subs	.50	.54
Specific Error Types		
Category		
IIa. GP	.79	.79
IIb. SBF	.21	.50 **
IIc. SB	.59	.81 *
IId. SF	.18	.54 *
IIe. Mean	.20	.55 **
IIf. Cor	.06	.13

* $p < .01$

** $p < .001$

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